

IN SITU SUBSTRATE HOLDER LEVELING METHOD AND APPARATUS

ABSTRACT OF THE DISCLOSURE

Embodiments of the present invention are directed to adjusting the spacing between the substrate support and the faceplate of the gas distribution member to achieve improved uniformity of the layer formed on the substrate. One embodiment of the present invention is directed to a method of adjusting a spacing between a gas distribution member and a substrate support disposed generally opposite from the gas distribution member, wherein the substrate support is configured to support a substrate on which to form a layer with improved thickness uniformity. The method comprises forming a layer on the substrate disposed on the substrate support; measuring a thickness of the layer on the substrate; and calculating differences in thickness between a reference location on the substrate and a plurality of remaining locations on the substrate. The method further comprises computing spacing adjustment amounts for the remaining locations relative to the reference location based on the differences in thickness between the reference location and the remaining locations. The spacing adjustment amount is positive to increase the spacing between the substrate support at the location and the gas distribution member if the thickness is greater at the location than at the reference location. The spacing adjustment amount is negative to decrease the spacing between the substrate support at the location if the thickness is smaller at the location than at the reference location.

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